

ABSTRACT OF THE DISCLOSURE

At least one two-dimensional grid is projected onto a three-dimensional subject in order to determine or represent contours of the subject based on distortion of the grid. Each grid has a wavelength or range of wavelengths that is different than those of every other grid, and different than a wavelength or range of wavelengths of light used to illuminate the subject, permitting optical separation of the grids during capture of the image of the subject. Range finding and/or scaling may be accomplished by alignment of multiple grids, or by using a ladar (laser radar) or similar range finder to determine the distance to a predetermined point or feature on at least one of the grids.